

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously Presented) A DC/DC voltage converter comprising:

a first positive terminal and a first negative terminal for connection respectively to two terminals of a high-voltage electrical network;

a second positive terminal and a second negative terminal for connection respectively to two terminals of a low-voltage electrical network; and

n cells connected in parallel, where n is an integer greater than unity, disposed between said first positive and negative terminals and between said second positive and negative terminals, each cell comprising a chopper DC/DC converter, each having a first circuit branch interconnecting said first and second negative terminals, a second circuit branch including an inductor and interconnecting said first and second positive terminals, chopper means comprising at least one chopper switch, and a management unit adapted to control OFF and ON switching of the chopper switch with a determined duty ratio;

wherein each cell further comprises a single protection transistor disposed in said second circuit branch and associated with a protection management unit for taking said cell out of service independently of the other cells; and

wherein the protection transistor of each cell is a MOS transistor connected in series in said second circuit branch of the cell between the inductor and said second positive terminal, and including an intrinsic diode connected to the inductor by its cathode and to said second positive terminal by its anode.

2. Cancelled.

3. (Previously Presented) A converter according to claim 1, further comprising a protection switch which is common to all of the cells, and which is associated with a portion of the converter that is opposite from the single protection transistor in each cell.

4. (Previously Presented) A converter according to claim 1, wherein the single protection transistor in each cell is connected in a high-voltage portion of the cell.

5. (Original) A converter according to claim 4, in which the protection transistor is a MOS transistor connected in series in said second circuit branch so as to be immediately adjacent to said first positive terminal, and having an intrinsic diode connected to said first positive terminal by its cathode.

6. (Previously Presented) A converter according to claim 4, further comprising a protection switch which is common to all of the cells and which is associated with a low-voltage portion of the converter.

7. (Currently Amended) A voltage converter system, comprising:

a first electrical network comprising a first positive terminal and a first negative terminal;

a second electrical network comprising a second positive terminal and a second negative terminal, the second electrical network having a different voltage than the first electrical network;

a converter comprising a plurality of cells coupling the first electrical network and the second electrical network, the plurality of cells each comprising voltage conversion circuits whereby power from the first electrical network may be transferred to the second electrical network through the plurality of cells, the plurality of cells arranged in parallel; and

a plurality of protection components coupled to the plurality of cells, each cell associated with a single protection component for taking the cell out of service independently of

the other cells, wherein the plurality of protection components comprise a protection component associated with all of the plurality of cells.

8. (Previously Presented) The system of claim 7, wherein the cells comprise DC/DC converters.

9. (Previously Presented) The system of claim 7, wherein the single protection component associated with each cell comprises a transistor.

10. (Currently Amended) The system of claim 9, wherein the ~~the~~ single protection component associated with each cell comprises an intrinsic diode.

11. (Previously Presented) The system of claim 7, wherein the single protection component associated with each cell is connected in a high voltage portion of the cell.

12. Cancelled.

13. (Previously Presented) The system of claim 7, wherein the protection component associated with all of the plurality of cells comprises a transistor.

14. (Previously Presented) The system of claim 7, wherein the protection component associated with all of the plurality of cells is connected to a first portion of the cell, the first portion being a high voltage portion or a low voltage portion, and the single protection component associated with each cell is connected in a second portion of the cell, the second portion being the other of the high voltage portion and the low voltage portion than the first portion.

15. (Previously Presented) The system of claim 7, wherein the components that are dedicated to a protection function give rise to static consumption of power less than 0.5% of the total static consumption of the converter.

16. (Previously Presented) The system of claim 7, wherein the first electrical network and second electrical network are components of a vehicle.

17. (Currently Amended) A DC/DC converter system, comprising:
- a first electrical network comprising a first positive terminal and a first negative terminal;
 - a second electrical network comprising a second positive terminal and a second negative terminal, the second electrical network having a different voltage than the first electrical network;
 - a converter comprising a plurality of cells coupling the first electrical network and the second electrical network, the plurality of cells each comprising a DC/DC converter whereby power from the first electrical network may be transferred to the second electrical network through the plurality of cells, the plurality of cells arranged in parallel; ~~and~~
 - a plurality of protection transistors coupled to the plurality of cells, each cell associated with a single protection transistor for taking the cell out of service independently of the other cells, wherein the plurality of protection transistors comprise a protection transistor associated with all of the plurality of cells.
18. (Previously Presented) The system of claim 17, wherein the cells comprise non-isolated chopper DC/DC converters.
19. (Previously Presented) The system of claim 17, wherein the single protection transistor associated with each cell comprises a MOS transistor.
20. (Previously Presented) The system of claim 19, wherein the single protection transistor associated with each cell comprises an intrinsic diode.
21. (Previously Presented) The system of claim 17, wherein the single protection transistor associated with each cell is connected in a high voltage portion of the cell.
22. Cancelled.

23. (Previously Presented) The system of claim 17, wherein the protection transistor associated with all of the plurality of cells is connected to a first portion of the cell, the first portion being a high voltage portion or a low voltage portion, and the single protection transistor associated with each cell is connected in a second portion of the cell, the second portion being the other of the high voltage portion and the low voltage portion than the first portion.

24. (Previously Presented) The system of claim 17, wherein the components that are dedicated to a protection function give rise to static consumption of power less than 0.5% of the total static consumption of the converter.

25. (Previously Presented) The system of claim 17, wherein the plurality of cells comprise \underline{n} cells connected in parallel, where \underline{n} is an integer greater than unity.

26. Cancelled.

27. (Previously Presented) The system of claim 17, wherein each of the plurality of cells comprises both a buck converter and a boost converter.

28. (Previously Presented) The system of claim 17, wherein the first electrical network and second electrical network are components of a vehicle.

29. Cancelled.

30. (Previously Presented) A DC/DC converter system, comprising:

a first electrical network comprising a first positive terminal and a first negative terminal;

a second electrical network comprising a second positive terminal and a second negative terminal, the second electrical network having a different voltage than the first electrical network;

a converter comprising a plurality of cells coupling the first electrical network and the second electrical network, the plurality of cells each comprising a DC/DC converter whereby

power from the first electrical network may be transferred to the second electrical network through the plurality of cells, the plurality of cells arranged in parallel; and

a plurality of protection transistors coupled to the plurality of cells, each cell associated with a protection transistor for taking the cell out of service independently of the other cells, the components of the converter that are dedicated to a protection function giving rise to static consumption of power less than 0.5% of the total static consumption of the converter.

31. (Previously Presented) The system of claim 30, wherein the cells comprise non-isolated chopper DC/DC converters.

32. (Previously Presented) The system of claim 30, wherein a protection transistor associated with each cell comprises an intrinsic diode.

33. (Previously Presented) The system of claim 30, wherein the plurality of protection transistors comprise a protection transistor associated with all of the plurality of cells.

34. (Previously Presented) The system of claim 30, wherein the plurality of cells comprise n cells connected in parallel, where n is an integer greater than unity.

35. (Previously Presented) The system of claim 30, wherein each of the plurality of cells comprises both a buck converter and a boost converter.

36. (Previously Presented) The system of claim 30, wherein the first electrical network and second electrical network are components of a vehicle.